

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 073082-0101

In re patent application of

Kazuhide KAWAI et al.

Serial No.: Unassigned

Filed: January 31, 2002

For: CERAMIC MEMBER WITH FINE PROTRUSIONS ON SURFACE AND
METHOD OF PRODUCING THE SAME

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-identified application, Applicant respectfully request that the following amendment be entered into the application:

IN THE CLAIMS:

Please replace claims 4, 7, 8, 11, 12, 13, and 16 with the amended claims as follows:

--4. (Amended) The method of producing the ceramic member as set forth in claim 2, wherein the acid etchant is a sulfuric acid or a water solution thereof, otherwise a phosphoric acid or a water solution thereof.

7. (Amended) The surface rugged ceramic member as set forth in claim 5, wherein the dense base material is 90 wt% or higher of a theoretical density.

8. (Amended) The surface rugged ceramic member as set forth in claim 5, wherein the dense base material is alumina, yttrium aluminum garnet, aluminum nitride, yttria, zirconia, and calcium phosphate based ceramics.

11. (Amended) The method of producing the surface rugged ceramic member as set forth in claim 9, wherein the acid etchant is pressurized with 0.2 MPa or higher.

12. (Amended) The method of producing the surface rugged ceramic member as set forth in claim 9, wherein the acid etchant is a water solution containing sulfuric acid or phosphoric acid.

13. (Amended) The method of producing the surface rugged ceramic member as set forth in claim 9, wherein the ceramic base material is carried out on the surface thereof with a heat treatment at temperatures of 2/3 or higher of a melting point of the ceramics after the corrosion treatment with the acid etchant.

16. (Amended) The surface rugged ceramic member as set forth in claim 14, wherein the dense ceramic base material comprises one kind or more of alumina, yttrium aluminum garnet, aluminum nitride, yttria, and zirconia.--

Please add new claims 20 through 26 as follows:

--20. (New) The method of producing the ceramic member as set forth in claim 3, wherein the acid etchant is a sulfuric acid or a water solution thereof, otherwise a phosphoric acid or a water solution thereof.

21. (New) The surface rugged ceramic member as set forth in claim 6, wherein the dense base material is 90 wt% or higher of a theoretical density.

22. (New) The surface rugged ceramic member as set forth in claim 6, wherein the dense base material is alumina, yttrium aluminum garnet, aluminum nitride, yttria, zirconia, and calcium phosphate based ceramics.

23. The method of producing the surface rugged ceramic member as set forth in claim 10, wherein the acid etchant is pressurized with 0.2 MPa or higher.

24. (New) The method of producing the surface rugged ceramic member as set forth in claim 10, wherein the acid etchant is a water solution containing sulfuric acid or phosphoric acid.

25. (New) The method of producing the surface rugged ceramic member as set forth in claim 10, wherein the ceramic base material is carried out on the surface thereof with a heat treatment at temperatures of 2/3 or higher of a melting point of the ceramics after the corrosion treatment with the acid etchant.

26. (New) The surface rugged ceramic member as set forth in claim 15, wherein the dense ceramic base material comprises one kind or more of alumina, yttrium aluminum garnet, aluminum nitride, yttria, and zirconia.--


REMARKS

Applicant respectfully request that the foregoing amendments to Claims 4, 7, 8, 11, 12, 13 and 16 and new Claims 20-26 be entered in order to avoid this application incurring a surcharge for the presence of one or more multiple dependent claims.

Respectfully submitted,

January 31, 2002

Date


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VERSIONS WITH MARKINGS TO SHOW CHANGES MADE

4. The method of producing the ceramic member as set forth in claim 2[or 3], wherein the acid etchant is a sulfuric acid or a water solution thereof, otherwise a phosphoric acid or a water solution thereof.
7. The surface rugged ceramic member as set forth in claim 5 [or 6], wherein the dense base material is 90 wt% or higher of a theoretical density.
8. The surface rugged ceramic member as set forth in [any one of] claim[s] 5[or 6], wherein the dense base material is alumina, yttrium aluminum garnet, aluminum nitride, yttria, zirconia, and calcium phosphate based ceramics.
11. The method of producing the surface rugged ceramic member as set forth in claim 9[or 10], wherein the acid etchant is pressurized with 0.2 MPa or higher.
12. The method of producing the surface rugged ceramic member as set forth in [any one of]claim[s] 9 [or 10], wherein the acid etchant is a water solution containing sulfuric acid or phosphoric acid.
13. The method of producing the surface rugged ceramic member as set forth in [any one of] claim[s] 9 [or 10], wherein the ceramic base material is carried out on the surface thereof with a heat treatment at temperatures of 2/3 or higher of a melting point of the ceramics after the corrosion treatment with the acid etchant.
16. The surface rugged ceramic member as set forth in claim 14[or 15], wherein the dense ceramic base material comprises one kind or more of alumina, yttrium aluminum garnet, aluminum nitride, yttria, and zirconia.